CLAIMS

1. A single mode optical fibre comprising a light-conductive core portion (4), an internal cladding portion (3) surrounding this core portion (4) and a jacketing portion (1) surrounding this internal cladding portion (3), in which the refractive index of the core portion (4) is larger than those of the cladding portion and jacketing portion areas (3, 1) and in which the refractive indices of the cladding portion and jacketing portion areas (3,1) are practically equal, characterised in that the internal cladding portion (3) is built up of SiO2 comprising a fluorine doping within a range of 0.1 – 8.5 wt.%, thus resulting in the core portion (4) to be subjected to a compressive axial stress over its full cross section.

2. A single mode optical fibre according to claim 1, characterised in that the amount of fluorine in the internal cladding portion (3) lies within the range of 0.2 – 2.0 wt.%.

3. A single mode optical fibre according to claim 1, characterised in that there is a buffer layer (2) between the jacketing portion (1) and the internal cladding portion (3), which buffer layer (2) has a refractive index that is lower than that of the core portion (4) and is practically equal to those of the internal cladding portion (3) and jacketing portion (1) areas.

4. A single mode optical fibre according to claim 1, characterised in that there is an intermediate layer (5) between the core portion (4) and the internal cladding portion (3), which intermediate layer (5) has a refractive index that is lower than that of the core portion (4) and is practically equal to those of the internal cladding portion (3) and jacketing portion (1) areas.

5. A single mode optical fibre according to claim 1, characterised in that there is an external cladding portion (7) on the outside of the jacketing portion (1), which external cladding portion (7)

has a refractive index that is practically equal to those of the internal cladding portion (3) and jacketing portion (1) areas.

6. A single mode optical fibre according to claim 1, characterised in that the internal cladding portion (3) has a thickness that lies within the range of 3 – 21 µm.

7. A single mode optical fibre according to claim 1, characterised in that the core portion (4) is built up of SiO2 comprising fluorine doping within a range of 0.2 – 2.0 wt.%.

8. A method for the manufacture of a single mode optical fibre, comprising a light-conductive core portion, an internal cladding portion surrounding this core portion and a jacketing portion surrounding this internal cladding portion, in which the refractive index of the core portion is larger than those of the internal cladding portion and jacketing portion areas, and in which the refractive indices of the internal cladding portion and jacketing portion areas are practically equal, according to which method a silica substrate tube, functioning as jacketing portion, is being flushed with one or more reactive gases to form the internal cladding portion and the core portion, respectively, after which the substrate tube is collapsed and is drawn into a single mode optical fibre, characterised in that the internal cladding portion (3) is built up of SiO2 comprising of fluorine doting within a range of 0.1 – 8.5 wt.%, thus resulting in the core portion (4) to be subjected to a compressive axial stress over its full cross section.

9. A method according to claim 8, characterised in that the amount of fluorine in the internal cladding portion (3) lies within the range of 0.2 – 2.0 wt.%.

10. A method according to claim 8, characterised in that a buffer layer (2) is inserted between the jacketing portion (1) and the internal cladding portion (3), which buffer layer (2) has a refractive index that is lower than that of the core portion (4) and is practically equal to those of the internal cladding portion (3) and jacketing portion (1)

areas.

11. A method according to claim 8, characterised in that an intermediate layer (5) is inserted between the core portion (4) and the internal cladding portion (3), which intermediate layer (5) has a refractive index that is lower than that of the core portion (4) and is practically equal to those of the internal cladding portion (3) and jacketing portion (1) areas.

12. A method according to claim 8, characterised in that on the outside of the jacketing portion (1) an external cladding portion (7) is placed, which external cladding portion (7) has a refractive index that is practically equal to those of the internal cladding portion (3) and jacketing portion (1) areas.

13. A method according to claim 8, characterised in that the formation of the core portion (4), and the internal cladding portion (3), and possibly of the external cladding portion (7), the intermediate layer (5) and/or buffer layer (2), is carried out by means of a PCVD procedure.

14. A method according to claim 13, characterised in that the PCVD procedure is carried out under plasma induction.